

EAST IS EAST, AND WEST IS WEST:

Ideological Segregation and Online News Communities in Ukraine

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Echo chambers and filter bubbles: myth or reality?

- Some studies suggest the presence of "echo chambers" and "filter bubbles" on social media (Sunstein 2017; Garimella et al. 2018) that might increase societal polarization and lead to political radicalization (Beaufort 2018)
- Others argue that news consumers on social media are not sorted into ideological clusters (Bakshy, Messing, and Adamic 2015; Flaxman, Goel, and Rao 2016; Zuiderveen Borgesius et al. 2016)

Motivation

Majority of the studies on social media news consumption and echo chambering and polarization on social media are focused on Western democracies which in many cases have lower levels of polarization than non-Western states, especially ones that are engaged in internal armed conflicts, such as the one going on in Eastern Ukraine

Study of polarization is pressing in such contexts since persistence of segregated communities can aggravate the hostilities and undermine conflict resolution efforts (Lynch, Freelon, and Aday 2017)

Research questions

RQ1: What is the place of news content, including partisan news content, in media diets of Ukrainian users on Vkontakte compared with other types of content (e.g. entertainment)?

RQ2: Is the consumption of partisan news content accompanied by the formation of isolated ideological communities (i.e. “filter bubbles”)?

RQ3: What is the relationship between demographic, geographic, and linguistic factors and the consumption of pro-Ukrainian and pro-Russian partisan news content?

Data

Public information of 50702 Vkontakte users with self-reported residence in Ukraine [years of birth, gender, places of residence, languages spoken, subscriptions to public pages]

Data was collected in June 2018 using Vkontakte's API and vkR package (Sorokin [2015] 2019)

Though Vkontakte was banned in Ukraine in May 2017, it is still constantly ranked among the top 10 sites in the country; #3 as of May 2019, while Facebook is #7 (“Top Sites in Ukraine - Alexa” n.d.)

Methods

1. Qualitative analysis and coding of public pages with at least 100 subscribers in the sample (n=4195) into 5 categories: entertainment (n=4015), news (n=112), politicians (n=1), technical (n=12), commerce (n=55).
2. Coding of news pages' partisanship (pro-Ukrainian/pro-Russian/neutral)
3. Examination of audience overlap between news pages using network-based audience duplication approach [co-exposure networks] (Webster and Ksiazek 2012), division of network into communities (Blondel et al. 2008)
4. Regression analysis to establish which factors [e.g. gender, age, language preferences, region of residence] influence subscription to partisan news communities

Findings

News pages are a minor part of Vkontakte's media ecology, but they still reach considerable proportions of the sample

News pages without a clear pro-Ukrainian or pro-Russian bias dominate in the sample. Pro-Russian pages are the least popular, contrary to widespread claims about the use of Vkontakte to spread pro-Russian sentiments in Ukraine

	N of communities	N of unique subscribers	Average n of subscribers
Neutral	63	11,105	284
Pro-Russian	13	2,131	182
Pro-Ukrainian	36	8,060	369

Legend:

- Pro-Ukrainian, 13.2% of nodes
- Major TV Channels, 12%
- Insurgent-controlled regions, 10.9%
- Mainstream media (e.g. UNIAN), 9%
- Sport news, 8.5%
- Russian IT, science-focused media, 8.3%
- Mixed (Ukr+pro-Rus+IT), 8%
- Kharkiv local news, 6.7%
- Kyiv local news, 5.5%
- Odessa local news, 3.5%
- Apple, IT-related, 3.1%
- Dnipro local news, 2.8%
- Rivne local news + Ukr police official community, 18%
- Kryvyi Rih local news, 17%
- Zaporizhia local news, 17%
- Kherson local news, 17%
- Khmelnytskyi local news, 12%

Network Visualization Labels:

- FK «Shahter» Donetsk
- Tipichnyy Harkov
- Harkov LIVE
- Huevyy Harkov
- Korrespondent.net
- UNIAN
- FUTBOL UKRAINI | Championat Svitu 2018
- Kanal 1+1
- TSN
- Ukrainskiy prostir
- Tipichnyy Kiev
- KievGO
- Odessa kak ona est...
- Tipichnyy Hersoa
- TIPICHNY DNEPR
- Goryachie FAKTY
- Mir Faktov
- Android Blog | Igrovoy bot
- LepraApple
- Tipova Ukraina
- Tipichnoe Zaporozhe
- Vid Tarasopolia do Ternopolia
- TIPICHNOE DNEPR
- Tipichnyy Harkov
- Harkov - kuda ishodit? #HarkovGO
- Olimpiade igry
- Vysokii Tekhnologii
- Liniach
- Champions Cup | Championat Mira po fut bolu
- Realnyy Futbol | Championat mira
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The graph displays a complex network of relationships between various entities, primarily media outlets and organizations. The nodes are color-coded into several clusters, each representing a different group of related entities:

- Green Cluster:** Includes entities like "Tipicnyj Herson", "Tipicnyj Zaporozh'e", "Krivij Rig - moye misto 1KR.UA", "Mir Faktov", "Goryache FAKTY", "CGTN na russskom", "Doneck | Lugansk | Novorossiya", "LUGANSK | NOVOSTI LNR", "Tipicnyj Doneck", "Antimaidan", "Eto Krivoj Rog, Detka | EKRD (c)", "Odessa kak ona est'", "Vsyia Odessa", "Klub National Geographic Rossiya", "Lepira", "Esquire", "Telekanal TET", "24 Kanal", "UNIAN | UNIAN", "V gorode Kiev", "Korrespondent.net", "AIN UA", "FK Metallist Har'kov", "Novosti Har'kova", "Har'kov LIVE", "Tipicnyj Har'kov", "Har'kov City", "Huevyj Har'kov", "TV", "Novosti RT na russskom", "Odessa kak ona est'...", "Doneck | Ulicy goroda", "Svodki ot opolcheniya Novorossii", "Samooborona Gorlovki", "LIFE | Novosti", "Svodki | V Donecke | Novosti | Oper. Svodki", "Tipicnyj Kramatorsk", "Digital - Zhurnal o tehnologii", "Nasha strana Rossiya", "Nacional'na policiya Ukrainy | Politsiya", "Ukraina dlya UKRAINCIV", "PROSKURIV (Hmel'nic'kij)", "Ukraina - Malorossiya", "Hmel'nic'kij Life", "Ukrains'kij prostir", "Patriot Ua", "Tipovij Cernigiv", "Vid Tarnopolya do Ternopolya", "Suvorij Bar'kulyu", "Telekanal STB", "Moya Ukraina: My Ukraine", "VOYNA ZA UKRAINU", "NOVINI DONEC'KA ATO", "Kiev LIVE", "BUK", "Tipovij Frankivs'k", "TIPOVE RIVNE", "Champions Cup | Cempionat Mira po futbolu", "Real Madrid CF | Real Madrid", "FUTBOL UKRAINI", "Cempionat Svitu 2018", "Real'nyj Futbol | Cempionat mira", "CM-2018", "MIRA 2018", "FUTBOL S GOAL24 | CEMPIONAT MIRA 2018", "FUTBOL S GOAL24 | CEMPIONAT MIRA 2018", "Tipicnoe Zaporozh'e", "Android Blog | Igrovoj bot", "Real'nyj Futbol | Cempionat mira", "CM-2018", "FE: CM-2018", "EF | Obzor CM-2018", "TIPICNYE CERKASSY", "UKRAINA LIVE - NOVINI / ATO", "TSN", "Tipova Ukraina", "Ukrains'kij prostir", "Hmel'nic'kij Life", "Ukraina - Malorossiya", "PROSKURIV (Hmel'nic'kij)", "Kanal 1+1", "Incident Kiev", "UKROP | NOVINI UKRAINI | ATO", "Klub Yuristov Ukrainy", "DTP i CP | Kiev Onlajn", "KievGO", "5 kanal", "Gromads'ke Telebaccenne. 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Findings

Dependent variable	Subscription to pro-Ukrainian communities
Independent variable	Rating
Language: Ukrainian only	0.364*** (0.089)
Gender: male	-0.196*** (0.061)
Region [Crimea]	-1.438*** (0.283)
Region [East Ukr; DNR]	-1.901*** (0.121)
Region [East Ukr; state-controlled]	-0.728*** (0.090)
Region [East Ukr; LNR]	-2.038*** (0.204)
Region [South Ukr]	-0.818*** (0.099)
Region [West Ukr]	0.165** (0.082)
Constant	0.727*** (0.067)
Observations	5,001
Log Likelihood	-3,127.935
Akaike <u>Inf.</u> Crit.	6,273.870
Note:	*p<0.1; **p<0.05; ***p<0.01

Best predictors of subscription to pro-Ukrainian partisan pages are language preferences, gender and region of residence

Findings

Best predictors of
subscription to pro-
Russian partisan
pages are region of
residence and age

Dependent variable	Subscription to pro-Russian communities
Independent variable	Rating
Age [under 18]	0.371** (0.151)
Age [25-29]	-0.100 (0.138)
Age [30-49]	0.117 (0.117)
Age [50+]	-0.063 (0.189)
Region [Crimea]	-0.961 (0.725)
Region [East Ukr; DNR]	1.590*** (0.138)
Region [East Ukr; state-controlled]	0.121 (0.154)
Region [East Ukr; LNR]	1.864*** (0.190)
Region [South Ukr]	0.159 (0.169)
Region [West Ukr]	0.333** (0.130)
Constant	-2.478*** (0.128)
Observations	5,001
Log Likelihood	-1,766.222
Akaike <u>Inf.</u> Crit.	3,554.445
Note:	*p<0.1; **p<0.05; ***p<0.01

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Thank you!